

Audit of Forest Planning and Practices

Tembec Industries Inc.

Forest Licence A20212

**(Formerly held by Crestbrook Forest
Industries Ltd.)**



FPB/ARC/45

December 2001

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Report from the Board

A. Report from the Board

This is the Board's report on a compliance audit of Forest Licence A20212, held by Tembec Industries Inc. (Tembec). Forest Licence A20212 was formerly held by Crestbrook Forest Industries Ltd. During the audit period Crestbrook Forest Industries Ltd. was amalgamated with Tembec.

The operating area for this licence is located in mountainous terrain in the Kootenay Lake Forest District, primarily north of the city of Creston to the headwaters of the Goat River.

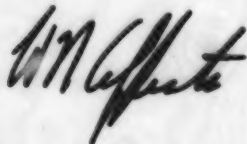
The Report from the Auditor (Part C) provides further details on geographic and biological features, allowable annual cut, and silvicultural systems pertinent to the licence. Part C also describes the scope of the audit and the audit findings. The Report from the Auditor is based on the findings identified through the application of the audit procedures described in Part B, which provides background information on the Board's audit program and the process followed by the Board in preparing its report.

The audit examined Tembec's planning and practices for the period of July 1, 2000, to July 30, 2001, related to operational planning (including forest development plans and silviculture prescriptions); timber harvesting; road construction, maintenance and deactivation; silviculture; and fire protection.

The Board considered the Report from the Auditor along with supporting audit evidence and affirms the auditor's findings and conclusions. Tembec's forest planning and practices complied, in all significant respects, with Code requirements for operational planning; timber harvesting; silviculture; fire protection; and road construction, maintenance, and deactivation activities.

The Board notes that Tembec has cooperatively worked with government agencies toward achieving the intent of the Code. Tembec has demonstrated a high level of performance in complying with the Code and achieving Code objectives for the protection of key forest resources, such as visually sensitive areas, caribou habitat, old growth timber and stand-level biodiversity.

The Board encourages Tembec to continue its cooperative approach towards achieving the intent of the Code with respect to managing and conserving key forest resources.



W.N. (Bill) Cafferata, RPF
Chair, Forest Practices Board
December 11, 2001

**Forest Practices Board
Compliance Audit Process**

B. Forest Practices Board Compliance Audit Process

Background

Forest Practices Board conducts audits of government and agreement-holders for compliance with the *Forest Practices Code of British Columbia Act* and regulations (the Code). The Board has the authority to conduct these periodic independent audits under section 176 of the *Forest Practices Code of British Columbia Act* (the Act). Compliance audits examine forest planning and practices to determine whether or not they meet Code requirements.

The Board undertakes both "limited scope" and "full scope" compliance audits. A limited scope audit examines selected forest practices (e.g., road construction, maintenance and deactivation; timber harvesting; or silviculture) and the related operational planning activities. A full scope audit examines all operational planning activities and forest practices.

The Board determines how many audits it will conduct in a year, and what type of audits (limited or full scope), based on budget and other considerations. The Board audits agreement-holders who have forest licences or other tenures under the *Forest Act* or the *Range Act*. The Board also audits government's Small Business Forest Enterprise Program (SBFEP), which is administered by Ministry of Forests district offices. Selection of agreement-holders and district SBFEPs for audit is done randomly, using a computer program, to ensure a fair, unbiased selection of auditees.

Audit Standards

Audits by the Forest Practices Board are conducted in accordance with the auditing standards developed by the Board. These standards are consistent with generally accepted auditing standards.

The audits determine compliance with the Code based on criteria derived from the *Forest Practices Code of British Columbia Act* and its related regulations. Audit criteria are established for the evaluation or measurement of each practice regulated by the Code. The criteria reflect judgments about the level of performance that constitutes compliance with each requirement.

The standards and procedures for compliance audits are described in the Board's *Compliance Audit Reference Manual*.

Audit Process

Conducting the Audit

Once the Board selects an audit and decides on its scope (limited scope or full scope), the audit period and the staff and resources required to conduct the audit are determined. Board staff also meet with the party being audited to discuss the logistics of the audit before commencing the work.

All the activities carried out during the period subject to audit are identified; for example, harvesting or replanting sites and building or deactivating road sections. The items that make up each forest

activity are referred to as a "population." For example, all sites harvested form the "timber harvesting population." All road sections constructed form the "road construction population." The populations are then sub-divided based on factors such as characteristics of the sites and potential severity of the consequences of non-compliance on the sites.

For each population, the auditors choose the most efficient means of obtaining information to conclude whether there is compliance with the Code. Because of limited resources, auditors usually rely upon sampling to obtain audit evidence, rather than inspecting all activities.

Individual sites and forest practices within each population have different characteristics, such as the type of terrain or type of yarding. Each population is divided into distinct sub-populations on the basis of common characteristics (e.g., steep ground vs. flat ground). A separate sample is selected for each population (e.g., the cutblocks selected for auditing timber harvesting). Within each population, more audit effort (i.e., more audit sampling) is allocated to the sub-population where the risk of non-compliance is greater.

Audit work in the field includes assessments from the air using helicopters and intensive ground procedures, such as measuring specific features like road or riparian reserve zone width. The audit teams generally spend one to two weeks in the field.

Evaluating the Results

The Board recognizes that compliance with the many requirements of the Code is more a matter of degree than absolute adherence. Determining compliance, and assessing the significance of non-compliance, requires the exercise of professional judgment within the direction provided by the Board.

Auditors collect, analyze, interpret and document information to determine the audit results. The audit team, composed of professionals and technical experts, first determines whether forest practices are in compliance with Code requirements. For those practices considered to not be in compliance, the audit team then evaluates the degree to which the practices are judged not in compliance. The significance of the non-compliance is determined based on a number of criteria, including the magnitude of the event, the frequency of its occurrence and the severity of the consequences.

As part of the assessment process, auditors categorize their findings into the following levels of compliance:

Compliance – where the auditor finds that practices meet Code requirements.

Not significant non-compliance – where the auditor, upon reaching a non-compliance conclusion, determines that a non-compliance event, or the accumulation and consequences of a number of non-compliance events, is not significant and is not considered worthy of reporting.

Significant non-compliance – where the auditor determines that the event or condition, or the accumulation and consequences of a number of non-compliance events or conditions, is or has the potential to be significant, and is considered worthy of reporting.

Significant breach – where the auditor finds that significant harm has occurred, or is beginning to occur, to persons or the environment as a result of the non-compliance. A significant breach can also result from the cumulative effect of a number of non-compliance events or conditions.

Identification of a possible significant breach requires the auditor to conduct tests to confirm whether or not there has been a breach. If it is determined that a significant breach has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the Ministers of Forests, Energy and Mines, and Water, Land and Air Protection.

Reporting

Based on the above evaluation, the auditor then prepares the "Report from the Auditor" for submission to the Board. The party being audited is given a draft of the report before it is submitted to the Board so that the party is fully aware of the findings. The auditee is also kept fully informed of the audit findings throughout the process, and is given opportunities to provide additional relevant information and to ensure the auditor has complete and correct information.

Once the auditor submits the report, the Board reviews it and determines if the audit findings may adversely affect any party or person. If so, the party or person must be given an opportunity to make representations before the Board decides the matter and issues a final report to the public and government. The representations allow parties that may potentially be adversely affected to present their views to the Board.

At the discretion of the Board, representations may be written or oral. The Board will generally decide on written representations, unless the circumstances strongly support the need for an oral hearing.

The Board then reviews the report from the auditor and the representations from parties that may potentially be adversely affected before preparing its final report, which includes the Board's conclusions and, if appropriate, recommendations.

If the Board's conclusions or recommendations result in newly adversely-affected parties or persons, additional offers of representations would be required.

Once the representations have been completed, the report is finalized and released: first to the auditee and then to the public and government.

Report from the Auditor

Report from the Auditor

1.0 Introduction

As part of the Forest Practices Board's 2001 compliance audit program, Forest Licence A20212 was selected for audit from the population of major forest licences within the Nelson Forest Region. The licence, held by Tembec Industries Inc. (Tembec), was selected randomly and not on the basis of location or level of performance. Forest Licence A20212 was formerly held by Crestbrook Forest Industries Ltd. During the audit period, Crestbrook Forest Industries Ltd. was amalgamated with Tembec.

Forest Licence A20212 is a volume-based licence within the Kootenay Lake Timber Supply Area and lies within the Kootenay Lake Forest District. Forest licences do not have specific geographic boundaries within which forest activities are restricted. Traditionally, and during the period of the audit, Tembec's operations under Forest Licence A20212 were primarily north of the city of Creston to the headwaters of the Goat River (see attached map). The terrain in this area is mountainous, contains numerous watersheds and riparian features, and provides habitat for a significant ungulate population, including caribou.

Forest Licence A20212 has an allowable annual cut of 115,000 cubic metres. Approximately 130,000 cubic metres were harvested during the audit period, predominantly by ground-based methods. The silviculture system used most frequently was clearcut with reserves.

In May 1998, the Ministry of Forests district manager designated landscape units with biodiversity emphasis options in the Kootenay Lake Forest District. Tembec's operations during the audit period were in three landscape units, two with intermediate biodiversity emphasis and one with low emphasis.

In July 1997, the Ministry of Forests and the Ministry of Environment, Lands and Parks (now the Ministry of Water, Land and Air Protection) completed the *Kootenay-Boundary Land Use Plan Implementation Strategy*, which remained in effect during the period of the audit. The implementation strategy provided direction to licensees' forest development planning and applied to the area under Tembec's forest development plan.¹

The *Kootenay-Boundary Higher Level Plan* (KBHLP) was declared a higher level plan² under the Code in January 2001. The KBHLP also applies to the area under Tembec's forest development plan, however it did not apply to Tembec's forest development plan approved during the audit period.

2.0 Audit Scope

The audit examined Tembec's planning and field activities in the areas of operational planning (including forest development plans and silviculture prescriptions³); timber harvesting; road construction, maintenance and deactivation; silviculture; and fire protection.

These activities, plans and obligations were assessed for compliance with the *Forest Practices Code of British Columbia Act* and related regulations (the Code), including consistency with landscape unit biodiversity emphasis designations and relevant aspects of the *Kootenay-Boundary Land Use Plan Implementation Strategy*. The period for which activities were examined was July 1, 2000, to July 30, 2001.

The activities carried out by Tembec during the audit period, and therefore subject to audit were:

Operational planning

- the approved 2000-2004 forest development plan
- 27 silviculture prescriptions approved during the audit period, of which 11 had harvesting activities

Timber harvesting and road construction, maintenance and deactivation

- harvesting of 43 cutblocks, of which 9 were less than 1 hectare and therefore exempted from the requirement for silviculture prescriptions
- construction of 25 road sections totalling 32.5 kilometres
- maintenance of 99 road sections totalling 424 kilometres, involving activities such as road surfacing and cleaning culverts and ditches
- maintenance of 45 bridges and construction of 1 bridge
- semi-permanent deactivation of 41 road sections totalling 65.6 kilometres, and permanent deactivation of 11 road sections totalling 7.4 kilometres
- layout and design of 11 road sections totalling 17.1 kilometres

Silviculture

- site preparation for tree planting on 5 cutblocks and tree planting of 49 cutblocks
- brushing on 4 cutblocks
- prescribed burning on 5 cutblocks
- juvenile spacing on 1 cutblock
- regeneration obligations for 33 cutblocks
- free growing obligations for 8 cutblocks

Fire protection

- fire protection planning and infrastructure
- fire tools and equipment for active operations

Section 3.0 describes the audit of these activities and the audit results. The Board's audit reference manual, *Compliance Audit Reference Manual, Version 5.0, May 2001*, sets out the standards and procedures that were used to carry out this audit.

3.0 Audit Findings

Planning and practices examined

The audit work on selected roads and cutblocks included ground-based procedures and assessments from the air using a helicopter. The audit examined:

Operational planning

- the approved 2000-2004 forest development plan, including its consistency with higher level strategies that address objectives for old-growth timber retention, visual quality, ungulate habitat and biodiversity emphasis
- 9 silviculture prescriptions approved during the audit period, 7 of which supported harvesting activity during the audit period

Timber harvesting and road construction, maintenance and deactivation

- harvesting of 22 cutblocks and their related silviculture prescriptions
- construction of 6 road sections totalling 12.3 kilometres
- maintenance of 24 road sections totalling 129 kilometres
- maintenance of 23 bridges and construction of 1 bridge
- semi-permanent deactivation of 18 road sections totalling 37.3 kilometres, and permanent deactivation of 4 road sections totalling 3 kilometres
- layout and design of 2 road sections totalling approximately 4 kilometres

Silviculture

- site preparation for tree planting on 3 cutblocks and tree planting of 5 cutblocks
- brushing on 2 cutblocks
- prescribed burning on 3 cutblocks
- juvenile spacing on 1 cutblock
- regeneration obligations for 4 cutblocks
- free growing obligations for 3 blocks

Fire protection

- fire protection planning and infrastructure
- fire tools and equipment for 6 of 9 operations active during the audit

Findings

The audit found that Tembec's forest planning and practices complied, in all significant respects, with Code requirements for operational planning; timber harvesting; road construction, maintenance and deactivation; silviculture; and fire protection. Instances of non-compliance observed were few and minor in nature.

Tembec's planning and practices were also consistent with landscape unit biodiversity emphasis designations and relevant aspects of the *Kootenay-Boundary Land Use Plan Implementation Strategy*.

4.0 Other Comments

The audit identified several strategies that, although not higher level plans under the Code, had a positive impact on the forest management standards achieved by Tembec.

Setting landscape level objectives through higher level plans and landscape units with objectives was envisaged under the Forest Practices Code as a key component to provide direction in forest development planning to ensure, among other objectives, adequate consideration of wildlife habitat needs, biological diversity, and old-growth timber.

Setting landscape objectives is a substantial undertaking that includes extensive public consultations and collection of forest inventories. In the Kootenay Lake Forest District, this process is not yet completed.

In the absence of higher level objectives, the Kootenay Lake Forest District had in place several strategies that addressed key forest resources in the district, including caribou and other ungulate winter-range habitats and known scenic areas in the district. An old seral patch strategy was also in place, wherein harvesting has been avoided in key areas of the forest district to facilitate the development of permanent old-growth management areas under the Code.

These strategies, along with the landscape units described in the introduction to this report, reflect the status of implementation of the Code in the Kootenay Lake Forest District during the period of the audit. Although the strategies were not higher level plans under the Code, Tembec's planning and practices were consistent with the strategies. A number of Tembec's cutblocks had been deferred or altered to support retention of key areas identified by the strategies.

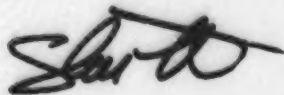
5.0 Audit Opinion

In my opinion, the operational planning; timber harvesting; road construction, maintenance, and deactivation; silviculture; and fire protection activities carried out by Tembec Industries Inc. under Forest Licence A20212, from July 1, 2000 to July 30, 2001, were in compliance, in all significant respects, with the requirements of the Code as of July 2001.

Without qualifying my opinion, I draw attention to section 4.0, which describes the place of higher level plans in the planning regimes anticipated by the Code, the state of higher level planning in the Kootenay Lake Forest District, and its impact on Tembec's forest planning and practices.

In reference to compliance, the term "in all significant respects" recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or that are detected but not considered worthy of inclusion in the audit report.

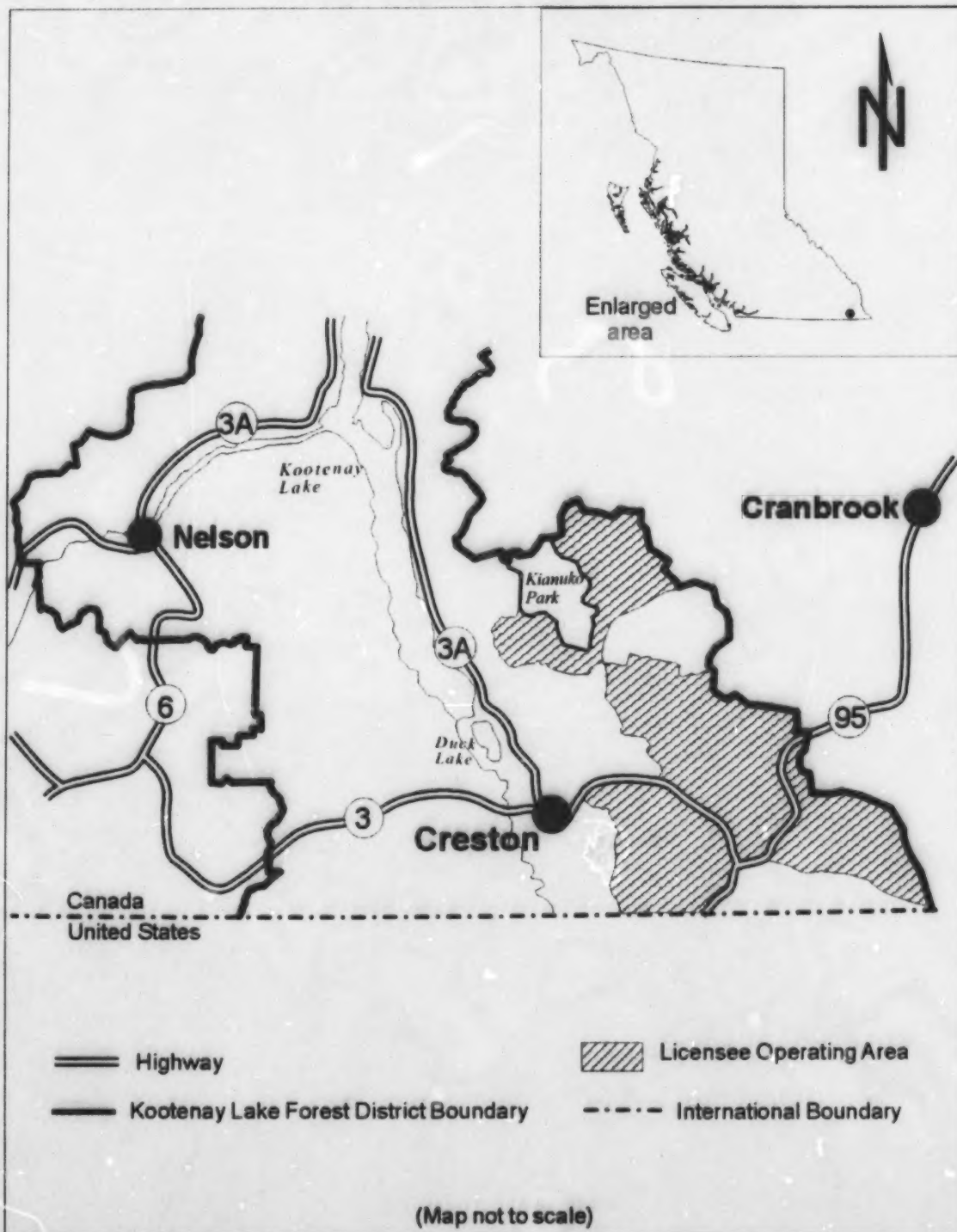
Sections 2.0 and 3.0 of this report from the auditor describe the basis of the audit work performed in reaching the above opinion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with the Code.



Steven M. Tribe, CA
Auditor of Record

Victoria, British Columbia
November 21, 2001

**Audit of Tembec Forest Industries Ltd.
Forest Licence A20212**



ⁱ A forest development plan is an operational plan that provides the public and government agencies with information about the location of proposed roads and cutblocks for harvesting timber over a period of at least five years. The plan must specify measures that will be carried out to protect forest resources. It must also be consistent with any higher level plans. Site-specific plans are required to be consistent with the forest development plan.

ⁱⁱ A forest development plan is an operational plan that provides the public and government agencies with information about the location of proposed roads and cutblocks for harvesting timber over a period of at least five years. The plan must specify measures that will be carried out to protect forest resources. It must also be consistent with any higher level plans. Site-specific plans are required to be consistent with the forest development plan.

ⁱⁱⁱ A silviculture prescription is a site-specific operational plan that describes the forest management objectives for an area to be harvested (a cutblock). The silviculture prescriptions examined in the audit are required to describe the management activities proposed to maintain the inherent productivity of the site, accommodate all resource values, including biological diversity, and produce a free-growing stand capable of meeting stated management objectives. Silviculture prescriptions must be consistent with forest development plans that encompass the area to which the prescription applies.